

Lab Farm 2

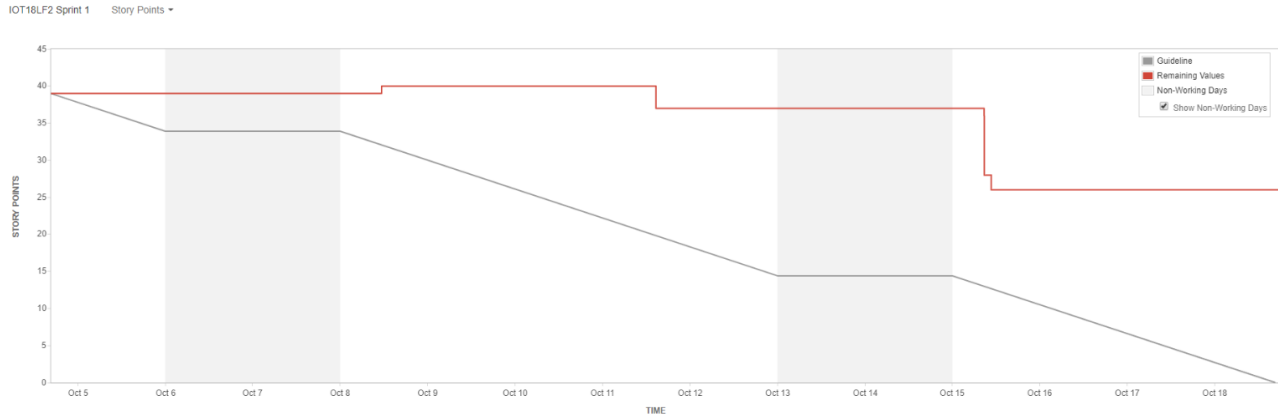


Inias Somers
Seppe De Beule
Sam Van Bogaert
Raymond Mohammad
Gilian Sterckx
Kevin Van de Vyver

Taakverdeling

- | | | |
|----------------------|----------------------|-------------------|
| • Seppe De Beule | ⇒ Plant Conditioning | ⇒ Web Dashboard |
| • Sam Van Bogaert | ⇒ Plant Conditioning | ⇒ Sensoren |
| • Inias Somers | ⇒ Plant Robot | ⇒ PCB |
| • Kevin Van de Vyver | ⇒ Plant Robot | ⇒ Constructie |
| • Raymond Mohammad | ⇒ Project Manager | ⇒ API |
| • Gilian Sterckx | ⇒ Camera | ⇒ Beeldherkenning |

Burndown Chart



▼ IOT18LF2 Sprint 1 9 issues

04/Oct/18 4:40 PM • 18/Oct/18 4:40 PM



0 7 18

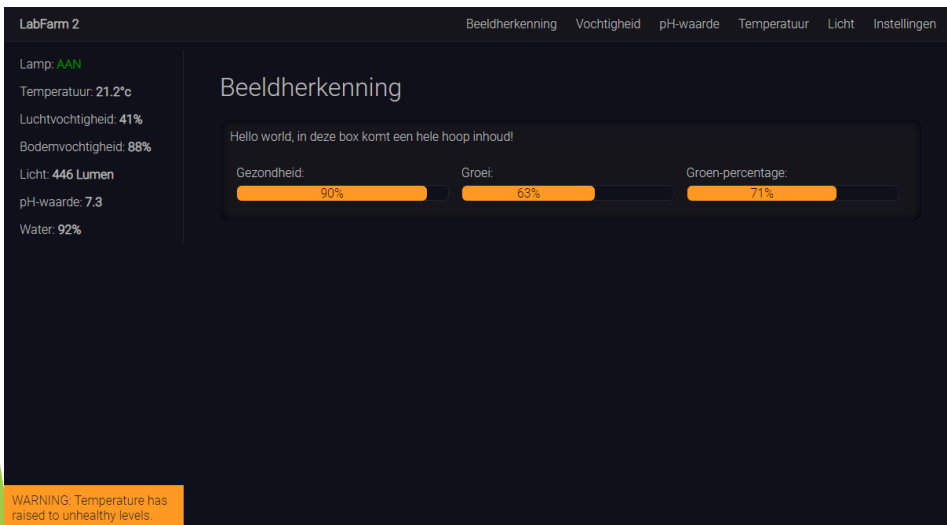
Linked pages

↑ IOT18LF2-69 As a developer, I want a relational database for all the sensor data	API	3
↑ IOT18LF2-45 As a user I want to know how the camera works	Testen	1
↑ IOT18LF2-4 As a user I want to have a web dashboard where I can view data about my plant	Dashboard	8
↑ IOT18LF2-9 As a user I want to know the luminosity around the plant	Sensoren	2
↑ IOT18LF2-39 As a user I want the power to be separated from any water	Voeding	3
↑ IOT18LF2-75 As a user, I want to design the general construction where everything is going to be attached to	Constructie	1
↑ IOT18LF2-2 As a user I want to know the temperature around the plant	Sensoren	2
↑ IOT18LF2-65 As user I want to create the electrical schematic	PCB	2
↑ IOT18LF2-63 As a user, I want a construction with the electrical components, the movable water supply and camera	Constructie	3

Sensoren

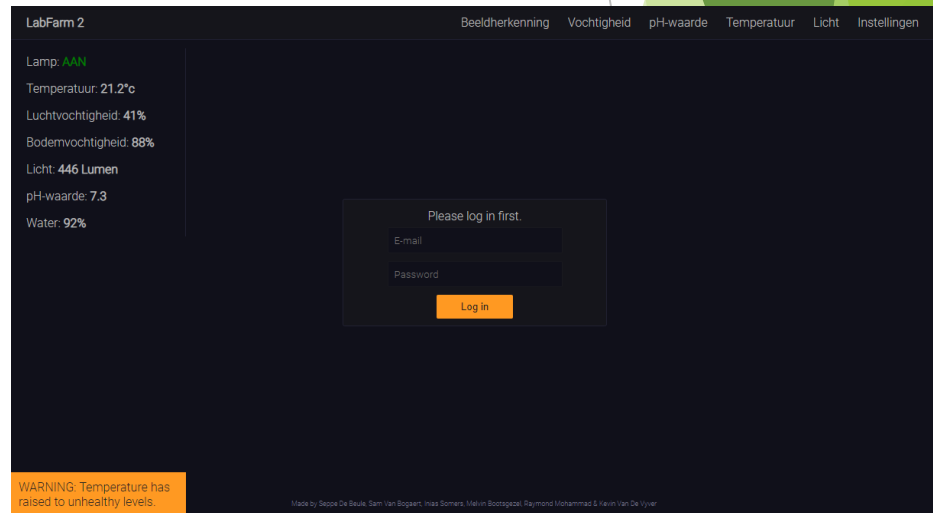
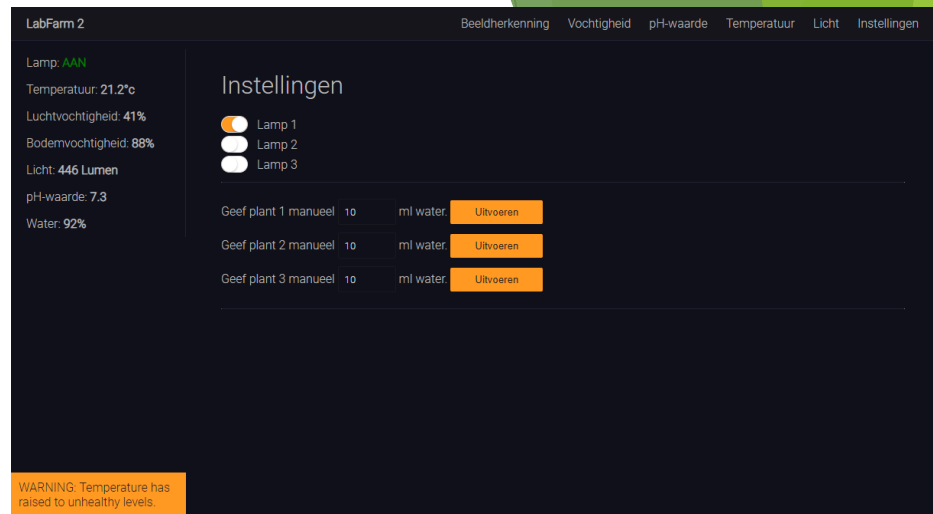
- LDR: Werkend
 - telt momenteel de tijd tussen aanwezigheid van licht en afwezigheid van licht
 - 1 μ F capacitor ontbreekt bij opstelling
- HCZ-D5-A
 - online weinig info ter beschikking

Dashboard

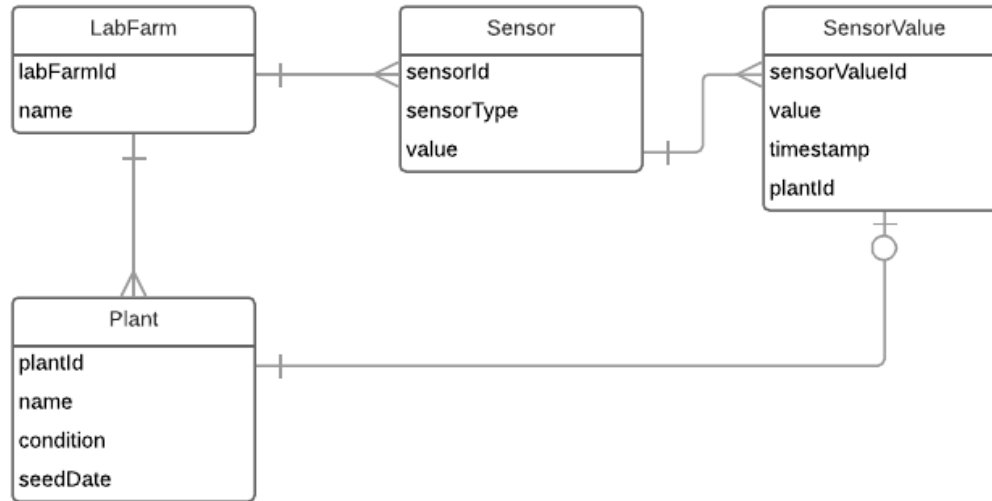


Functionele + mooie layout
Enkel front-end, voorlopig
Gebruik van third-party components zoals:

- NGX UI switch
- chart.js



Api



Camera

Pi Camera

- Goede ondersteuning
- Gemakkelijk instellingen aanpassen
- Gebruikt geen extra pinnen/poorten
- Gemakkelijk te gebruiken



Beeldherkenning


Clarifai:

- Berekent percentages voor elke voorkomende kleur

API Cloud Colortag:

- Betere kleurherkenning
- Sorteert zonder percentages van meest- naar minst-voorkomend

Result

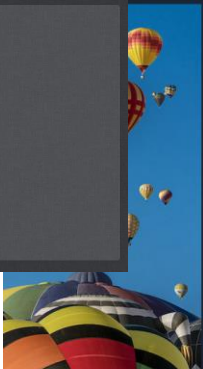


Legend:

- Red
- Pink
- Brown
- Gray
- Beige
- White

JSON Response

```
{
  "tags": [
    {
      "label": "Red",
      "color": "#E67E22"
    },
    {
      "label": "Pink",
      "color": "#F08080"
    },
    {
      "label": "Brown",
      "color": "#8B4513"
    },
    {
      "label": "Gray",
      "color": "#A9A9A9"
    },
    {
      "label": "Beige",
      "color": "#D2B48C"
    },
    {
      "label": "White",
      "color": "#FFFFFF"
    }
  ]
}
```

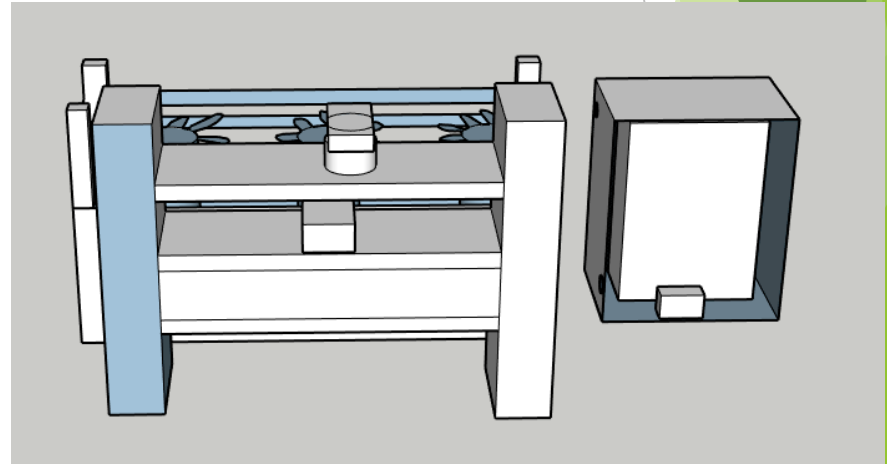
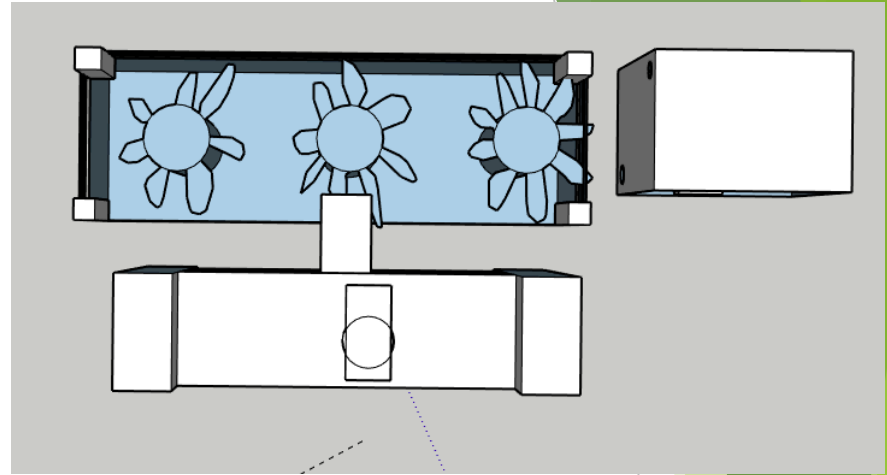
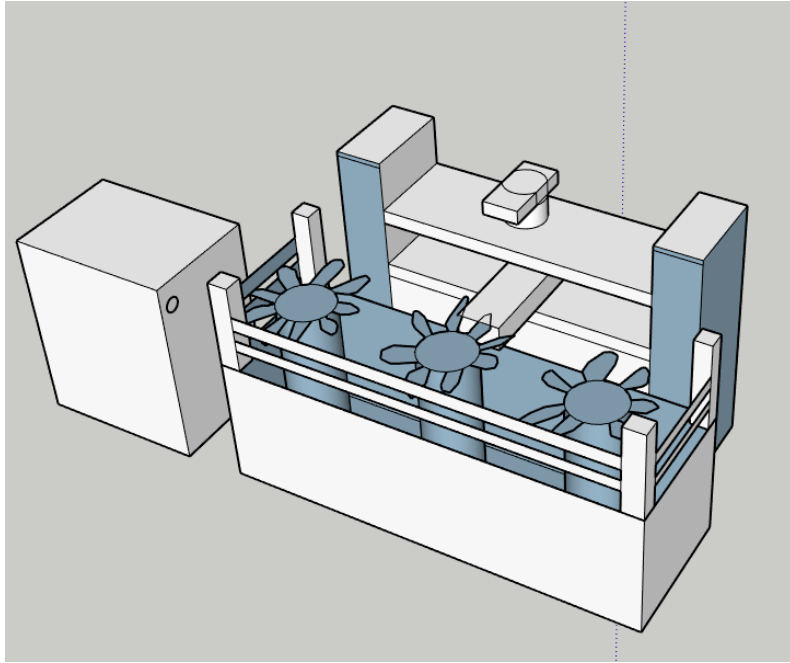


Color

Salmon #E87661	4%
Brown #8C2C2A	5%
LightGray #D1C9B9	8%
Olive #8B6A26	6%
DarkGray #6B6A5D	7%
LightGoldenrod #DCC850	7%
Black #25222C	0%
SteelBlue #7D75AC	50%

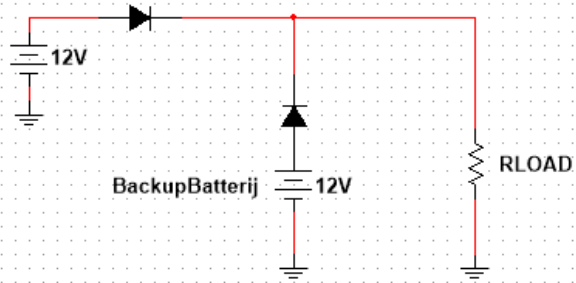
TRY YOUR OWN IMAGE OR VIDEO

Constructie



Onderzoek

- Backup batterij
- ADS1115
- Veilige scheiding spanning & water



AREI

Planning

- Sensoren allemaal aangesloten
- Dashboard werkend
- Elektrisch schema
- Eerste pcb design
- Constructie van de rails
- Camera kleur detectie